NEW SPECIES OF DISONYCHA AND NOTES (COL. CHRYSOMELIDÆ)

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The following notes and descriptions are a part of others on North American Chrysomelidæ made at odd times in previous years and were intended to be included in a larger paper now in preparation. However, for various reasons it is thought advisable to publish them separately.

Disonycha quinquevittata Say.

Dr. Leconte's *puncticollis* and *punctigera* are at least good races, not plain synonyms of *quinquevittata* and should be recognized as such; his *pluriligata* is the same as Say's species. *D. fumata,* as already pointed out by me does not belong in this group but is what Dr. Horn wrongly identified as the Mexican *crenicollis,* which apparently does not occur in the U. S. Judging from the localities given by Dr. Horn it seems that he associated several distinct forms with his *crenicollis. D. capitata* Jac., described from Mexico is the same as var. *pura* Lec., and should be placed with the latter as a synonym.

The locality Florida for *punctigera* in the Leng catalogue is wrong. It was described from Kansas and is rather widely distributed in the west. Typical specimens from Kansas of this race differ from *quinquevittata* in having a narrower black median vitta on each elytron, the prothorax usually a little wider and the elytra more distinctly and closely punctate, which, however, is more or less variable in both. Typical *quinquevittata* from Missouri, Kansas and Texas have a rather wide, black elytra vitta, slightly narrower prothorax, elytra usually more finely, sparsely punctate, the surface more shining, and the posterior part of the head rather sparsely punctate, at least in nearly all my specimens. Besides the localities mentioned I have specimens from Indianapolis, Ind., and Detroit, Mich.

A number of specimens from northern New York and Long Island, also a large series from Michigan, some from Iowa, Minne-

sota, Wisconsin and New Hampshire and Toronto, Canada, are very close to *punctigera,* but have a slightly wider prothorax and usually differently colored legs, though this is variable and certain specimens are difficult to place. The large series from Michigan shows a good deal of variation in regard to the median elytral vitta, which seems to be rather unusual in this genus. Some of these specimens are normally marked; in others the median elytral vitta is absent, but the two extremes are connected by intermediate specimens. The same variation occurs also in specimens from Idaho and Toronto, Canada, but not in those from northern New York and Long Island nor in typical *punctigera.*

The California var. *puncticollis* is shorter and somewhat more robust; the pronotum is usually very dull and the elytral vittae are rather wide as in typical *quinquevittata,* though specimens with narrow vittae occur. The var. *pura* is smaller and narrower than *punctigera* with relatively narrower prothorax, narrow median vitta on each elytron and usually the underside and legs pale except apex of tibiæ and tarsi black. In this form the lateral elytral vittæ are occasionally very faint and almost invisible. It occurs in Arizona and Mexico.

Besides those mentioned above I have three females from Cincinnati, Ohio, which seem to be different. They are narrower and more elongate than typical *punctigera,* the pronotum with only two black spots, the punctures on elytra denser and larger. A single female from Bening, Ga., has the elytral vittæ narrow as in *punctigera* but the prothorax narrower, more like in *quadrivittata* in form and the labrum entirely pale. I leave these with a few others for future investigations.

The punctation of the head used by Dr. Horn to separate *quinquevittata* and varieties from the other species, which have the ventral segments densely and finely punctate is variable. In some specimens the punctation is rather sparse, not punctured from side to side, leaving a distinct smooth space at middle. However, another character, apparently not noted before, separating these from the rest of the species except *abbreviata* and allies, is the more or less distinctly triangular emarginate labrum, which is in *caroliniana* and allies truncate at apex or at most broadly shallowly emarginate.

Disonycha asteris Schffr.

When I described this species I remarked on the close relationship of this to my *latifrons,* but with the material I had of both each appeared quite distinct. Additional material received since, also from different other localities, show the variability of the characters I used to separate them and therefore would place *asteris* as a variety of *latifrons.*

Disonycha brevicornis new species.

Similar in form to *caroliniana,* head pale, frontal tubercles, carina and neck black; near the eyes a few coarse punctures; labrum black, anteriorly truncate; antennæ black, first three joints more or less pale, third and fourth joints equal, outer joints short and somewhat stout. Prothorax slightly narrower than the elytra; sides rather feebly, arcuately narrowing to apex; apical and basal angles obtuse; surface scarcely punctate, pale, with two median dots and a short line below these black, also a larger black spot laterally on each side. Scutellum black. Elytra finely not densely punctate, pale with the usual, black sutural, medium and lateral vittæ, the median vitta slightly narrower than the pale space each side and with a distinct, though not strong, longitudinal, median elevation. Below, metasternum and ventral segments black except apical margins and the last pale; ventral segments moderately closely but not densely punctate and rather sparsely pubescent; femora reddish, anterior and middle one more or less black at base, tibiæ and tarsi black. Length 5.5 mm.

Colorado.

1 paratype USNM 44104

The three specimens before me are males, and judging from the slight costiform elevation on the median vitta, females may have the elytra distinctly costate and more or less longitudinally sulcate as in *pennsylvanica* and allies.

The color of the underside varies in the three specimens. Two have the ventral segments infuscate at middle and the anterior and middle femora are only slightly infuscate at base, another specimen has all the ventral segments black including the last but with more or less distinct pale apical margins and all the femora black at base. The punctation of the ventral segments is rather intermediate between the densely and sparsely punctate groups.

The short and rather stout antennal joints separate this distinct little species from those having the ventral segments largely black.

Disonycha nigriventris new species.

Underside and legs entirely black, except hind femora, which have a small reddish spot near apex; head black except antennal cavities and anterior margin of clypeus which are reddish; prothorax flavous with the usual large median and lateral spots of *unipunctata* and allies more or less transversely united, without distinct callus laterally. Elytra flavous with the usual sutural, median and lateral vittæ black, the median vitta as wide as the pale space each side; surface finely and sparsely punctulate. Length: 6 mm.

Oregon: Blitzen River; Idaho; Montana: Great Falls.

1 paratype USNM 49115

The type is a male from Oregon, the female has the elytra costate and longitudinally sulcate.

The color of the femora is variable, in some specimens the middle and hind femora are more red, but the ventral segments are apparently always entirely black including the last. The pronotal spots are as in some specimens of *uniguttata*, that is, a large one at middle, wider at apex and one on each side, these often unite forming an irregular transverse fascia.

This species is a member of the *pennsylvanica* group and has the general coloration of limbicollis but the pronotum has no lateral callosities and the elytra are finely, rather indistinctly punctulate. The ædeagus, extracted from one male, appears to be different from anything figured by Mrs. Blake.*

The key to the species of Disonycha* of the *pennsylvanica* group recently published by Mrs. Blake is apparently a provisional one covering only the typical specimens of each species, possibly to be replaced by a more complete key in her coming revision. The coloration, largely used in the key, is variable in the different species. *D. uniguttata* varies from having reddish legs except tarsi, which are infuscate, to legs with abdomen and head black. These latter, following her key, would be identified as *limbicollis* by those not having specimens of the latter for comparison; *nigriventris* also would be associated with it.

I have a series of specimens from Louisiana and Arkansas which, following the key, would be placed with her *pallipes;* a few of these specimens have the legs entirely black, except hind femora, which show a more or less distinct reddish spot. How-

* Bull. Brookl. Ent. Soc. XXV, 1930, p. 210, plate 13.

ever, they are more like *pennsylvanica* than *pallipes,* though the ædeagus extracted from one male seems to be different from those figured by Mrs. Blake. With her identification of *pallipes* Cr., I do not agree. Crotch made it a variety of *limbicollis,* the latter with distinct thoracic callus which, if absent in *pallipes,* would have been mentioned by him as he did in *pennsylvanica. D. pallipes* Cr., is in my opinion the same as *uniguttata* and the *pallipes* of Mrs. Blake is *procera* Cas., which name should be used for this species. Casey undoubtedly came to the same conclusion and possibly saw typical Crotch specimens of *pallipes* before Dr. Horn rearranged the species in the Leconte collection according to his own view at the time he revised the Halticini.

Mrs. Blake in her identification of *pallipes* seems to have been influenced by the specimens in the Brooklyn Museum material sent to Washington identified by me as *pallipes,* also in that of the National Museum identified by Dr. Schwarz as that species. The following explanation will clear this point. On one of my visits to the National Museum some years ago F. Knab came over to the office of Dr. Schwarz and in the general talk and discussions the matter of variation, wrong identification, etc., came up and Knab among other things called our attention to the wrong identification of *pennsylvanica* and the distinctness of *uniguttata* Say. Some time later after my return I remembered Knab's remarks and after comparing specimens with the description of *uniguttata* I found that he was correct and separated these from the rest of the specimens, which all were labelled *pallipes.* At the time I did not investigate *procera* and *pallipes* and the remaining specimens were left under the latter name. However, later, when I took up the matter again and using only my own material I overlooked changing the name on the specimens in the museum collection. If *uniguttata* was recognized and separated in the National Museum collection then Dr. Schwarz had done undoubtedly the same thing as I did at first.

Disonycha neglecta new species.

Pale flavous, pronotum with four dark spots and a short, more or less distinct median line; elytra with narrow, black sutural median and lateral vittae.

Head pale, antennal joints elongate, black the first three pale below, labrum black, apical margin truncate; interocular carina moderately dis-

tinct; frontal tubercles distinct, but flat; sparsely punctate near each eye. Prothorax nearly as wide as the elytra, sides feebly arcuately narrowing apically, basal and apical angles obtuse, surface indistinctly punctate. Elytra distinctly and closely punctate, the black median vitta much narrower than the pale space each side. Underside pale, except median part of prosternum, apex of tibiæ more or less and tarsi blackish; ventral segments rather densely punctate and pubescent. Length: 6.5 mm.

Kansas, Arizona, Utah, Oregon.

1 paratype ♂ USNM 44116

The type is a male from Kansas. The Arizona and Utah specimens have the ventral segments blackish at apex and the tibiæ in the Utah specimen are black on the internal edge, otherwise they are like the Kansas type.

This species has nearly the form of *latifrons* but the underside is pale and the space between antennæ and clypeus is not flat but convex and rather subcarinate.

Disonycha laticollis new species.

Similar in form to *caroliniana* but much larger, with relatively wider prothorax and sutural and lateral vittæ confluent at apex. Head pale, a small punctate, depressed area near each eye; frontal tubercles moderately distinct, flat; clypeus and interantennal space feebly convex, nearly flat; labrum black, apical margin subtruncate; antennal joints moderately elongate, black basal joint pale below. Prothorax transverse at base as wide as the elytra, about one and a half times as wide at base as long; sides moderately, arcuately narrowing to apex, apical and basal angles obtuse; surface smooth with two median black spots, a rather indistinct lateral spot on each side and a short line below the two central spots pale brown. Elytra with the usual sutural, median and lateral vittæ, the sutural and lateral vittæ uniting at apex, the median vitta slightly narrower than the pale space each side; surface distinctly but rather finely punctate, punctures well separated. Body below pale, metasternum black, ventral segments with a more or less distinct dark line at apex and somewhat densely punctate, pubescence moderate; femora red, tibiæ and tarsi black. Length 7.5 mm.

New York: Wyandanch, June, and Yaphank, Sept., Long Island.

1 paratype ♂ USNM 44117

This species is not unlike in form to *lodingi* which has narrower and longer antennal joints and the elytra are smooth and more shining.

Two specimens from Casco Bay, Maine, which I place provisionally with this species, have the elytra impunctate and more shining and the hind angles of prothorax are distinct.

Disonycha punctipennis new species.

Form less oval than *caroliniana*, elytra distinctly and closely punctate. Head flavous, a few moderately coarse punctures near each eye; frontal

tubercles moderately distinct; frontal carina distinct; labrum black, truncate at apex; antennal joints moderately elongate, black, three basal joints pale below. Prothorax nearly as wide as the elytra; sides moderately arcuately narrowing apically, apical and basal angles obtuse; surface shining and more or less distintcly punctate, anteriorly at middle two black spots and one lateral spot on each side. Elytra more parallel than in *caroliniana* with the usual sutural, median and lateral vittæ, the median vitta much narrower than the pale space each side; surface shining and moderately densely punctate. Below pale metasternum infuscate apically at middle; ventral segments densely punctate and moderately pubescent; legs pale, internal edge and apex of tibiæ and tarsi black. Length: 7 mm.

Iowa: Lake Okoboji, July (Buchanan). Minnesota.

Type and paratypes in National Museum, also paratypes in my collection. 4 ♂ USNM 44118

The very distinct, rather dense punctation of the elytra and the somewhat more parallel form separates this from allied species.

Disonycha stenosticha new species.

Pale flavous, pronotum without any dark markings and elytra with new narrow, lineate, median vittæ.

Head pale, with a few rather indistinct punctures near each eye; frontal tubercles flat; frontal carina distinct, labrum pale, truncate anteriorly; antennæ reaching backwards to the middle of elytra, joints elongate, black, the first three pale beneath. Prothorax narrower than elytra; sides not strongly arcuately narrowing to apex; apical angles rounded, basal angles obtuse; surface smooth and shining, not punctate nor marked with black spots. Elytra slightly wider than the prothorax at base, shining, impunctate, with the black sutural, median and lateral vittæ very narrow. Body below flavous; ventral segments moderately closely punctate and feebly pubescent; legs pale, tarsi black. Length: 7 mm.

Texas: Brownsville, Jan.

The single female of this distinct species was given me by Mr. Gentner.

This species is less oval than most of the *caroliniana* group and similar in form to the variety *puncticollis*. This together with the smooth surface, general coloration and the very narrow elytral vittæ should easily identify *stenosticha*.